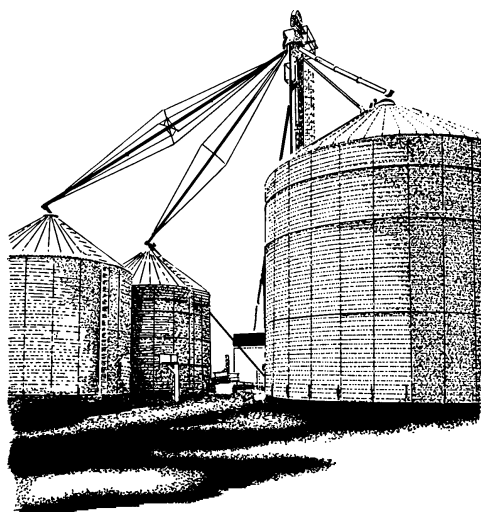


PLANT & PEST ADVISORY

FIELD CROPS/LIVESTOCK EDITION \$1.50

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INSIDE

Managing Your Crop After Harvest 1

Considerations for Weed Control in Small Grains 2

Fall Herbicide Applications in No-till 2

ALS-Resistant Pigweed in the Region 2

Fall Pasture Walk 3

NJ Growers' Irrigation Log Book Available 3

Feedback Form 3

Managing Your Crop After Harvest

William J. Bamka, Burlington County Agricultural Agent

As the harvest season begins, it is important to remember that crop management does not end once the crop is placed in the grain bin. Improper storage of grain can result in severe losses and possible rejection at the elevator.

Two of the most important factors regarding stored grain management are moisture content and temperature. These are two factors that can be managed through proper aeration and drying. Aeration greatly improves the "storability" of grain by maintaining a cool, uniform temperature throughout the storage bin to reduce mold development, insect activity, and to prevent moisture migration. Temperature differences in a bin of grain cause moisture to migrate from warmer areas to colder areas.

Temperature influences the development of insects, fungi, and natural air currents. The optimum temperature for safe grain storage is somewhere between 40° and 60°F. Typically, fungi and insects will not develop below 40°F. Temperatures above 60°F can favor rapid insect and fungi development. Additionally, maintaining the temperature of the grain within 10 – 15°F of the outside air temperature will help prevent problems that can occur due to the formation of natural air currents.

Grain moisture content also plays an important role in the length of time that grain can be safely stored. Table 1 depicts the optimum moisture content of various grains for safe long-term storage.

Table 1. Moisture Content of Grains for Safe Storage in Farm-Type Bins for One Year

Type of Grain	Moisture Content for Safe Storage (%)
Corn	Up to 13
Wheat	Up to 13.5
Soybeans	Up to 13
Sorghum	Up to 11

Source: Management of On-Farm Stored Grain, University of Kentucky.

The combination of temperature and moisture greatly influences how long grain can be stored. For example, corn at 15.5% moisture and 50°F can be stored for approximately 128 days while corn at 15.5% and 70°F can only be stored safely for 32 days.

Careful monitoring of grain moisture and temperature can help ensure safe long-term storage of your crop. □

Considerations for Weed Control in Small Grains

Mark VanGessel, Ph.D., Weed Science, University of Delaware

As wheat and barley season quickly approaches, just a few reminders for weed control. No-till small grains need to have a burndown herbicide prior to planting. Winter annuals like chickweed have begun to emerge and a non-selective herbicide will control them and reduce weed competition. Do not apply Banvel or 2,4-D in the fall prior to planting small grains. Banvel has a 20 days/pint/A planting restriction and 2,4-D label says do not use pre-plant on coarse-textured and sandy soils.

After the crop is planted, the earliest labeled treatment is Buctril, which can be applied at emergence, then Harmony Extra at the 2 leaf stage of the small grains. Fall treatments in small grains may not be adequate for full-season control and a second application in the spring is often necessary. However, many no-tilled small grain fields do require a fall treatment.

Ryegrass is one winter annual that needs to be treated in the fall. Applications of Hoelon by mid-November have had the most consistent results in the Mid-Atlantic region. Hoelon-resistant ryegrass has been identified on the southern region of the Delmarva Peninsula, in which case, Hoelon will not provide control.

Currently we do not have effective chemical control strategies for annual bluegrass, bulbous oatgrass, bromegrass, or Hoelon-resistant ryegrass.

Finesse has a label for both preemergence and postemergence applications in winter wheat and only postemergence applications in winter barley. Postemergence applications need to be made in the late fall. Finesse does not have a good fit in our area because it is erratic on annual ryegrass control and has very long residual which severely limits rotations and increases the risk of developing herbicide-resistant weed populations. Other than annual ryegrass, it does not improve control of most weed species compared to other herbicides. Vegetables can not be planted after Finesse and soybeans must be an STS variety. □

Fall Herbicide Applications in No-till

Mark VanGessel, Ph.D., Weed Science, University of Delaware

There is some interest in using a fall herbicide treatment for winter annual weed control in no-tillage fields. The idea is that there is less weed biomass at planting, can eliminate or use reduced rates of burndown herbicides and remove alternate hosts for some pests (although this may not be an issue). We have had a few studies with fall Roundup treatments in no-till fields sprayed in early October, that had very few weeds present at planting. We did not follow these plots to determine if an herbicide prior to planting soybeans was necessary. The benefit of using a residual herbicide I suspect would be minimal over an application of Roundup or Touchdown. Fall applications can reduce weed biomass the following spring but more work is needed to examine the best approach to incorporate this into an overall program. □

ALS-Resistant Pigweed in the Region

Mark VanGessel, Ph.D., Weed Science, University of Delaware

There are fields in Delaware where Pursuit herbicide was not effective in killing pigweed. These fields have a history of vegetable production and repeated use of Pursuit. Seeds from these fields have been tested and are resistant to Pursuit herbicide as well as all the other common ALS-inhibiting herbicides used in corn and soybeans (Pinnacle, Classic, Beacon, Accent, and Raptor). Also, pigweed from fields in southeastern Pennsylvania are showing the same pattern of resistance to all the common ALS-inhibiting herbicides. An indication of resistance is that only one weed species is present in the field; the weeds emerged months ago; and the herbicides you used typically control this species.

Resistance is a man-made problem from over-use of herbicides with the same site of action in the plant. Man further compounds the problem by spreading the seeds across fields and into previously uninfested fields. Once a field becomes infested with an herbicide-resistant species it will limit your weed control options for many years to come. Harvesting equipment is one of the big culprits of spreading weed seed. If you suspect a field has resistant weeds in it, be sure to clean your equipment thoroughly before moving to the next field. This means using an air hose or power washer to clean the equipment; just letting the combine run in the field is not going to be adequate. The time it takes to clean equipment at harvest is going to save many years of headaches in the future. □

Fall Pasture Walk

Wednesday, October 11, 2000 - 3:30 p.m.
Pete Staats' - Dutch Hollow Farm
Meadow Road, Bridgewater, NJ

Successful livestock farming often depends on efficient forage management. Quality pasture produces healthier animals, reduces feed and healthcare costs, and maximizes your profit. This field day has been set up to demonstrate some of the best management practices and skills used for productive and efficient pasture management.

- ◆ Learn about Movable Fencing
- ◆ View Alternative Livestock Watering System
- ◆ Evaluate Improved Forage Varieties for Grazing
- ◆ Determine Body Condition Score
- ◆ Understand Forage Rationing
- ◆ Learn about Fecal Sampling for Nutrient Balancing

Dinner will be provided by the Grazing Lands Conservation Initiative.

Please contact one of the USDA Natural Resources Conservation Service (NRCS) offices below for directions to Dutch Hollow Farm. To make reservations for dinner please reply by Thursday, October 5. Hackettstown NRCS Office (908) 852-2576 ext. 3; Flemington NRCS Office (908) 782-4614 ext. 3 □

New Jersey Growers' Irrigation Log Book Available

Rutgers Cooperative Extension (RCE) has developed a convenient pocket-sized New Jersey Growers' Irrigation Log Book. In addition to the log section, the book contains examples, tips on irrigation methods, conversions and resources for further information. The log book is free and available from your RCE County Office.

For growers who prefer to keep records on a full page format, log forms on 8 1/2 X 11 paper can be obtained from your County Agent.

The purpose in creating this practical record keeping booklet is to assist growers in complying with the New Jersey Department of Environmental Protection (DEP) Agricultural Irrigation Certification record keeping requirements. Voluntary reporting will help keep the growers' certifications free and reduce the need for further DEP regulation.

Rutgers Snyder Research & Extension Farm sustainable agriculture education funds paid for the publication costs for these guides. □

Editor's Note: This is the last issue of the Field Crops/Livestock edition of the Plant & Pest Advisory for the 2000 season. Please provide us with feedback on the newsletter by using the form below. Thank you for subscribing.

PLANT & PEST ADVISORY

Field Crops/Livestock edition Feedback Form

How are we doing? We would like to hear from you. Please provide comments below on how the newsletter helps your business, ways to improve the newsletter, etc.

Occupation _____ County _____

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